



Management of Unwanted Architectural Paint in Washington

**A Comparison of Existing Programs and a
Modeled Product Stewardship System to
Manage Unwanted Architectural Paint**

EXECUTIVE SUMMARY

January 2013

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Developed as a Project of the Northwest Product Stewardship Council

Funded by the King County
Solid Waste Division, Washington



King County

Executive Summary

Washington State is considering an industry-managed product stewardship system funded by an assessment that is built into the sale price of paint to manage the diversion and recovery of unwanted and leftover architectural paint—a high-volume, costly, and wasted resource. *Architectural paint* refers to interior and exterior architectural coatings (both latex and oil-based) used on housing, buildings, and other structures; it does not include industrial, original equipment, or specialty coatings. *Product stewardship*, also called *producer responsibility*, refers to an environmental management strategy in which all parties involved in the design, production, sale, and use of a product take responsibility for minimizing its environmental impact throughout all stages of its lifecycle, with manufacturers typically funding material recovery programs and recovering costs from consumers through product sales.

Product stewardship of unwanted and leftover architectural paint has been proposed as a solution for improving system performance, convenience, and cost-effectiveness. Local and state governments have been in national negotiations with paint manufacturers through the American Coatings Association (ACA) to reach an agreement on paint producer responsibility since 2002. This effort led to a national Memorandum of Understanding signed in 2008 by the Washington State Department of Ecology and 17 local government agencies in Washington. Other states—Oregon, California, Connecticut, and Rhode Island—have already adopted a paint stewardship approach. Analyses conducted in these states have shown that paint stewardship can result in cost savings for local governments and ratepayers, more convenient service for residents and businesses, and better environmental outcomes.

Unwanted paint poses risks to human health and the environment if not properly managed. Oil-based paint is toxic and flammable. Unwanted and leftover latex paint in liquid form is a problematic material in the waste stream, can contain harmful components, and is challenging for consumers to manage properly. Moreover, paint is made of materials that can be captured for reuse, recycling, energy recovery, or safe disposal, but doing so requires a more convenient and effective collection infrastructure with long-term, sustainable financing.

Currently, local governments in Washington are the primary providers of collection infrastructure and public education programs related to safe and responsible management of unwanted paint.

Architectural paint is one of the largest and most expensive waste streams managed by local governments' moderate risk waste (MRW) programs. In the interviews conducted for this study, local governments expressed concerns about the cost burdens of providing and funding paint management programs that are effective, convenient, and sufficient to meet the needs of Washington residents and businesses and to safeguard health and the environment. A number of local governments have already stopped collecting latex paint due, in part, to the high costs associated with latex paint collection and disposition.

This analysis compares Washington's existing programs with a modeled paint stewardship system for managing unwanted architectural paint. The study examines the infrastructure, performance, and costs of current and potential paint collection and recycling in Washington State. The manufacturer/consumer-funded stewardship program modeled in this report is based on real-world findings from currently operational paint stewardship programs, particularly in Oregon. The Oregon program is operated by PaintCare, a nonprofit organization created by ACA and funded through an assessment on architectural paint sold in the state. The paint stewardship program modeled for Washington State is assumed to represent a mature, fully implemented program operating at a stable level of collection and costs, which is envisioned to be achieved within three years of program implementation.

Key Findings and Comparisons

Paint Collection: A manufacturer/consumer-funded stewardship system will increase the number of collection sites and quantity of paint collected in Washington.

Washington’s Existing Programs	Paint Stewardship System Model
Program Management	
<p>Local government programs manage 94% of the unwanted paint collected in Washington State.</p>	<p>A nonprofit product stewardship organization would manage the statewide paint stewardship system on behalf of paint manufacturers.</p>
Collection System	
<p>50 fixed collection sites: Located in 31 of 39 counties.</p>	<p>More than 220 fixed collection sites: Located in 35 of 39 counties.</p>
<p>27 local government MRW facilities accept latex and oil-based paint. 17 local government MRW facilities accept oil-based paint only. 21 of 39 counties provide paint collection service to small quantity generators through public MRW programs, some at no charge and some for a fee.</p>	<p>36 local government MRW facilities would accept both latex and oil-based paint. 8 local government MRW facilities would accept oil-based paint only.</p>
<p>6 paint retail stores serve as collection sites under Clark County’s MRW program.</p>	<p>180+ private retail paint stores would voluntarily serve as collection sites.</p>
<p>60% of state residents (in 16 counties) have no access to latex paint collection.</p>	<p>100% of state residents would have access to latex paint collection.</p>
<p>1 site per 136,000 residents (statewide average). 8 counties do not have permanent paint collection sites.</p>	<p>1 site per 30,000 residents in urban areas. Convenience levels are assumed to be similar to Oregon’s program, where 94% of residents live within 15 miles of a collection site.</p>
<p>No residential curbside programs currently collect paint separately for special handling. Private paint collection services can be hired to pick up paint from businesses for a fee.</p>	<p>The stewardship program will expand paint collection options available at no charge to residents and small businesses.</p>

Washington’s Existing Programs	Paint Stewardship System Model
Volumes Collected	
<p>Approximately 507,000 gallons of unwanted paint were collected in 2010.</p> <p>38% of the estimated 1.34 million gallons of available paint were collected.</p>	<p>Approximately 947,000 gallons of unwanted paint are expected to be collected annually.</p> <p>70% of the estimated 1.34 million gallons of available paint would be collected.</p> <p>Paint collection volumes are projected to increase by 87%.</p>
<p>Statewide, latex paint collection has decreased by 44% since 2007.</p> <p>Many local governments have stopped collecting latex paint largely due to high operational and vendor costs.</p>	<p>Latex paint collection is projected to increase by 205% within the first three years of operation.</p>

Table ES-1. Quantities of Paint Collected, by Collection Type—Existing Programs vs. Stewardship

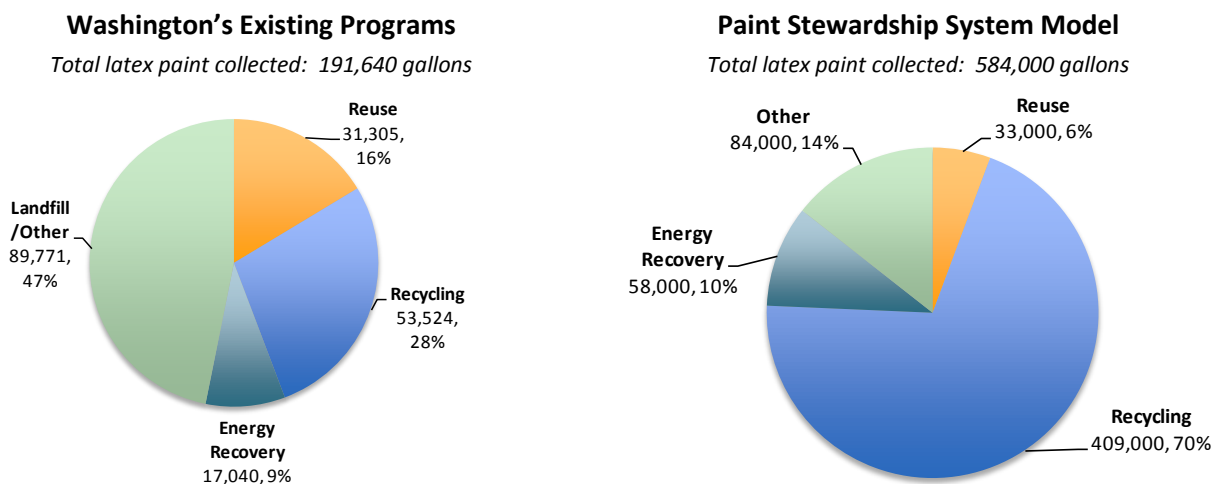
Collection Infrastructure	Existing Programs			Stewardship System Model		
	# of sites	gallons	%	# of sites	gallons	%
Public MRW Facilities	44	406,744	80%	44	527,650	56%
Retail Collection Sites*	6	10,281	2%	182	364,000	38%
Mobile Collection Events	83	60,085	12%	78	25,350	3%
Private Facilities and Large-Volume Pick-ups (contracted hazardous waste collectors)		30,125	6%		30,000	3%
TOTALS		507,235			947,000	

* Retail collection sites under Existing Programs are part of Clark County’s paint collection program, and disposition costs of paint collected by paint retailers are covered by Clark County.

Paint Disposition: The modeled stewardship program estimates an increase in latex paint recycling from 28% to 70% when fully implemented.

Washington’s Existing Programs	Paint Stewardship System Model
Disposition of <u>Latex</u> Paint	
<p>16% (by volume) of latex paint collected in 2010 was reused in its original form.</p> <p>28% was recycled, either back into paint or in the manufacture of other products, including cement.</p> <ul style="list-style-type: none"> ▪ 86% of latex paint recycled was collected by Clark County. ▪ Only 4% of latex paint collected from remaining counties was recycled. <p>9% was incinerated, in Spokane’s waste-to-energy facility.</p> <p>47% was solidified and disposed of in landfills.</p>	<p>Paint reuse is expected to increase by 5% in volume from about 31,000 to 33,000 gallons.</p> <p>70% of the latex paint collected is expected to be recycled back into paint or used in the manufacture of other products, including cement.</p> <ul style="list-style-type: none"> ▪ Recycling levels are assumed to be similar to Oregon’s program, which recycles 70% of collected paint.
Disposition of <u>Oil-based</u> Paint	
<p>3% of oil-based paint collected in 2010 was reused (in its original form).</p> <p>5% was recycled, through solvent recycling.</p> <p>85% was incinerated for energy recovery, usually in cement kilns.</p> <p>7% was disposed of in hazardous waste landfills or managed directly at a private treatment, storage, and disposal (TSD) facility.</p>	<p>15% more oil-based paint will be collected and safely managed through reuse or energy recovery.</p> <p>(The modeled system assumes that 3% of oil-based paint would be reused, and the remainder would be sent for energy recovery.)</p>

Figure ES-1. Comparison of Latex Paint Collection Quantities and Disposition Methods



Costs and Economic Impacts: Paint stewardship shifts costs from local governments and ratepayers to paint manufacturers and consumers when they purchase paint.

Washington’s Existing Programs	Paint Stewardship System Model
Financing	
<p>Local paint management programs are financed through garbage rates and local and state taxes.</p>	<p>A manufacturer/consumer-funded statewide paint stewardship program would be financed by paint consumers through the price they pay for paint.</p> <p>The stewardship program would cover transportation and disposal costs currently borne by local governments at MRW facilities and mobile events.</p>
Costs	
<p>Costs to local government for managing unwanted paint were nearly \$3 million dollars in 2010.</p> <p>\$6.17/gallon on average for collection, transport, and disposition (does not include administrative or facilities expenses) for various local government programs that do <u>not</u> serve all of the state.</p> <ul style="list-style-type: none"> ▪ Approximately \$7/gallon in Clark County for collection, transport, and recycling. Clark County is the only county in Washington where latex paint is consistently recycled. 	<p>Costs to local governments for managing paint are expected to drop by 40%—more than \$1.1 million per year in savings.</p> <p>Approximately \$6.55/gallon for collection, transport, and disposition (does not include administrative or facilities expenses) for a statewide system.</p> <p>The stewardship system is expected to bring a substantial increase in collection service and recycling:</p> <ul style="list-style-type: none"> ▪ 439,000+ additional gallons collected. ▪ 340,000+ additional gallons recycled. ▪ 176 new paint collection sites.
User Fees	
<p>Residents are not charged to bring their paint to a collection site.</p> <p>In some counties, small businesses are charged \$2 to \$4 per gallon of paint. 21 of 39 counties provide paint collection service to small quantity generator businesses through public MRW programs, some at no charge and some for a fee.</p>	<p>Residents are not charged to bring their paint to a collection site.</p> <p>Small businesses are not charged to bring their paint to a collection site.</p> <p>The assessment on paint sales included in the purchase price is assumed to be similar to Oregon and California:</p> <ul style="list-style-type: none"> ▪ No charge for ½-pint container or less ▪ \$0.35 for up to 1-quart container ▪ \$0.75 for up to 1-gallon container ▪ \$1.60 for up to 5-gallon container

The full report is available online at <http://productstewardship.net/our-activities/paint/reports>.